Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

ANALYTICAL RESULTS

Prepared by:

Prepared for:

Eurofins Lancaster Laboratories Environmental 2425 New Holland Pike Lancaster, PA 17601 Sunoco c/o Stantec 1060 Andrew Drive Suite 140 West Chester PA 19380

April 22, 2014

Project: Sunoco M.H.(RCRA)

Submittal Date: 04/10/2014 Group Number: 1466285 PO Number: SUN MARCUS HOOK RCRA State of Sample Origin: PA

Client Sample Description	<u>Lancaster Labs (LL) #</u>
MW 17 Grab Groundwater Sample	7426556
MW 28 Grab Groundwater Sample	7426557
MW 30 Grab Groundwater Sample	7426558
MW 40 Grab Groundwater Sample	7426559
MW 86 Grab Groundwater Sample	7426560
Trip Blank Water Sample	7426561

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO

Stantec

Attn: Stephanie Andrews

Respectfully Submitted,

Amek Carter Specialist

(717) 556-7252



Analysis Report

LL Sample # WW 7426556 LL Group # 1466285 Account # 11183

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: MW 17 Grab Groundwater Sample

Sunoco M.H. (RCRA)

Project Name: Sunoco M.H. (RCRA)

Collected: 04/09/2014 10:58 by CC Sunoco c/o Stantec 1060 Andrew Drive

Submitted: 04/10/2014 19:20 Suite 140

Reported: 04/22/2014 07:28 West Chester PA 19380

CAT No.	Analysis Name			CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS	Volatiles	EPA	624		ug/l	ug/l	
10371	Benzene			71-43-2	N.D.	0.9	1
10371	Ethylbenzene			100-41-4	N.D.	0.8	1
10371	Toluene			108-88-3	N.D.	0.8	1
10371	Xylene (total)			1330-20-7	N.D.	0.9	1
GC/MS	Semivolatiles	EPA	625		ug/l	ug/l	
10334	Acenaphthene			83-32-9	N.D.	0.3	1
10334	Anthracene			120-12-7	N.D.	0.2	1
10334	Benzo(a)anthracene			56-55-3	N.D.	0.2	1
10334	Benzo(a)pyrene			50-32-8	N.D.	0.3	1
10334	Di-n-butylphthalate			84-74-2	N.D.	0.5	1
10334	Chrysene			218-01-9	N.D.	0.2	1
10334	bis(2-Ethylhexyl)ph	thala	te	117-81-7	N.D.	1	1
10334	Fluorene			86-73-7	N.D.	0.3	1
	Naphthalene			91-20-3	N.D.	0.2	1
	Phenanthrene			85-01-8	N.D.	0.2	1
10334	Phenol			108-95-2	N.D.	0.4	1
Metals	5	SW-8	846 601	LOB	mg/l	mg/l	
07051	Chromium			7440-47-3	0.0320	0.0016	1
01754	Iron			7439-89-6	2.12	0.0430	1
07055	Lead			7439-92-1	0.0055 J	0.0047	1
	Manganese			7439-96-5	0.293	0.00083	1
01767	Sodium			7440-23-5	15.8	0.167	1
Wet Cl	nemistry	EPA	300.0		mg/l	mg/l	
00224	Chloride			16887-00-6	13.7	1.0	5
00228	Sulfate			14808-79-8	65.2	1.5	5
		EPA	335.4		mg/l	mg/l	
00237	Total Cyanide (wate	r)		57-12-5	N.D.	0.0050	1
		EPA	420.4		mg/l	mg/l	
00434	Phenols (water)			n.a.	N.D.	0.015	1
		EPA	1664A		mg/l	mg/l	
00612	SGT-HEM (TPH)			n.a.	N.D.	1.4	1



Analysis Report

Account

LL Sample # WW 7426556

11183

LL Group # 1466285

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Sample Description: MW 17 Grab Groundwater Sample

Sunoco M.H. (RCRA)

Project Name: Sunoco M.H. (RCRA)

Collected: 04/09/2014 10:58 by CC Sunoco c/o Stantec 1060 Andrew Drive

Submitted: 04/10/2014 19:20 Suite 140

Reported: 04/22/2014 07:28 West Chester PA 19380

RCR17

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/15. The temperature of the temperature blank bottle(s) for the SGT-HEM (TPH) containers upon receipt at the lab was 6.8C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 7.5-9.6 C.

The temperature of the sample bottle(s) for the 625 containers upon receipt at the lab was 8.3-8.7 C using an IR thermometer.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

	**** *** *** *** *** *** *** *** *** *										
CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor			
10371	BTEX by 624	EPA 624	1	M141012AA	04/12/2014	12:31	Andrea E Lando	1			
10334	SVOCs 625	EPA 625	1	14102WAB625	04/15/2014	23:01	Linda M Hartenstine	1			
08108	625 Water Extraction	EPA 625	1	14102WAB625	04/13/2014	19:00	Elaine F Stoltzfus	1			
07051	Chromium	SW-846 6010B	1	141011848003	04/16/2014	23:09	John W Yanzuk II	1			
01754	Iron	SW-846 6010B	1	141011848003	04/16/2014	23:09	John W Yanzuk II	1			
07055	Lead	SW-846 6010B	1	141011848003	04/16/2014	23:09	John W Yanzuk II	1			
07058	Manganese	SW-846 6010B	1	141011848003	04/16/2014	23:09	John W Yanzuk II	1			
01767	Sodium	SW-846 6010B	1	141011848003	04/16/2014	23:09	John W Yanzuk II	1			
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	141011848003	04/14/2014	10:42	Micaela L Dishong	1			
00224	Chloride	EPA 300.0	1	14105347601B	04/15/2014	17:46	Sandra J Miller	5			
00228	Sulfate	EPA 300.0	1	14105347601B	04/15/2014	17:46	Sandra J Miller	5			
00237	Total Cyanide (water)	EPA 335.4	1	14107102101A	04/17/2014	14:35	Venia B McFadden	1			
00434	Phenols (water)	EPA 420.4	2	14106113101A	04/17/2014	10:12	K Robert Caulfeild-James	1			
00492	Cyanide Water Distillation	EPA 335.4	1	14107102101A	04/17/2014	08:45	Nancy J Shoop	1			
00491	Phenol Distillation (water)	EPA 420.4	1	14106113101A	04/16/2014	10:15	Nancy J Shoop	1			
00612	SGT-HEM (TPH)	EPA 1664A	1	14107807801A	04/17/2014	16:59	Michelle L Lalli	1			



Analysis Report

LL Sample # WW 7426557 LL Group # 1466285 Account # 11183

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Sample Description: MW 28 Grab Groundwater Sample

Sunoco M.H. (RCRA)

Project Name: Sunoco M.H. (RCRA)

Collected: 04/09/2014 08:38 by CC Sunoco c/o Stantec 1060 Andrew Drive

Submitted: 04/10/2014 19:20 Suite 140

Reported: 04/22/2014 07:28 West Chester PA 19380

CAT No.	Analysis Name			CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS	Volatiles	EPA	624		ug/l	ug/l	
10371	Benzene			71-43-2	N.D.	0.9	1
10371	Ethylbenzene			100-41-4	N.D.	0.8	1
10371	Toluene			108-88-3	N.D.	0.8	1
10371	Xylene (total)			1330-20-7	N.D.	0.9	1
GC/MS	Semivolatiles	EPA	625		ug/l	ug/l	
10334	Acenaphthene			83-32-9	N.D.	0.3	1
	Anthracene			120-12-7	N.D.	0.2	1
10334	Benzo(a)anthracene			56-55-3	N.D.	0.2	1
10334	Benzo(a)pyrene			50-32-8	N.D.	0.3	1
10334	Di-n-butylphthalate			84-74-2	N.D.	0.5	1
10334	Chrysene			218-01-9	N.D.	0.2	1
10334	bis(2-Ethylhexyl)ph	thalat	ie .	117-81-7	N.D.	1	1
10334	Fluorene			86-73-7	N.D.	0.3	1
10334	Naphthalene			91-20-3	N.D.	0.2	1
	Phenanthrene			85-01-8	N.D.	0.2	1
10334	Phenol			108-95-2	N.D.	0.4	1
Metals	5	SW-8	346 603	10B	mg/l	mg/l	
07051	Chromium			7440-47-3	0.0062 J	0.0016	1
01754	Iron			7439-89-6	0.194 J	0.0430	1
07055	Lead			7439-92-1	N.D.	0.0047	1
07058	Manganese			7439-96-5	0.0783	0.00083	1
01767				7440-23-5	52.4	0.167	1
Wet Cl	nemistry	EPA	300.0		mg/l	mg/l	
00224	Chloride			16887-00-6	94.6	4.0	20
00228	Sulfate			14808-79-8	11.9	1.5	5
		EPA	335.4		mg/l	mg/l	
00237	Total Cyanide (wate			57-12-5	N.D.	0.0050	1
		EDV	420.4		mg/l	mg/l	
00434	Phenols (water)	BIA	120.1	n.a.	N.D.	0.015	1
		ED.	1664A		mg/l	mg/l	
00616	CCT TIPM (TPM)	EPA	T004A		=	=	
00612	SGT-HEM (TPH)			n.a.	N.D.	1.4	1



Analysis Report

Account

LL Sample # WW 7426557

11183

LL Group # 1466285

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: MW 28 Grab Groundwater Sample

Sunoco M.H. (RCRA)

Project Name: Sunoco M.H. (RCRA)

Collected: 04/09/2014 08:38 by CC Sunoco c/o Stantec 1060 Andrew Drive

Submitted: 04/10/2014 19:20 Suite 140

Reported: 04/22/2014 07:28 West Chester PA 19380

RCR28

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/15. The temperature of the temperature blank bottle(s) for the SGT-HEM (TPH) containers upon receipt at the lab was 6.8C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 7.5-9.6 C.

The temperature of the sample bottle(s) for the 625 containers upon receipt at the lab was $8.3-8.7\ \text{C}$ using an IR thermometer.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

			_					
CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
10371	BTEX by 624	EPA 624	1	M141012AA	04/12/2014	12:56	Andrea E Lando	1
10334	SVOCs 625	EPA 625	1	14102WAB625	04/15/2014	23:26	Linda M Hartenstine	1
08108	625 Water Extraction	EPA 625	1	14102WAB625	04/13/2014	19:00	Elaine F Stoltzfus	1
07051	Chromium	SW-846 6010B	1	141011848003	04/16/2014	23:13	John W Yanzuk II	1
01754	Iron	SW-846 6010B	1	141011848003	04/16/2014	23:13	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	141011848003	04/16/2014	23:13	John W Yanzuk II	1
07058	Manganese	SW-846 6010B	1	141011848003	04/16/2014	23:13	John W Yanzuk II	1
01767	Sodium	SW-846 6010B	1	141011848003	04/16/2014	23:13	John W Yanzuk II	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	141011848003	04/14/2014	10:42	Micaela L Dishong	1
00224	Chloride	EPA 300.0	1	14105347601B	04/15/2014	19:07	Sandra J Miller	20
00228	Sulfate	EPA 300.0	1	14105347601B	04/15/2014	18:51	Sandra J Miller	5
00237	Total Cyanide (water)	EPA 335.4	1	14107102101A	04/17/2014	14:36	Venia B McFadden	1
00434	Phenols (water)	EPA 420.4	1	14106113101A	04/17/2014	07:57	K Robert Caulfeild-James	1
00492	Cyanide Water Distillation	EPA 335.4	1	14107102101A	04/17/2014	08:45	Nancy J Shoop	1
00491	Phenol Distillation (water)	EPA 420.4	1	14106113101A	04/16/2014	10:15	Nancy J Shoop	1
00612	SGT-HEM (TPH)	EPA 1664A	1	14107807801A	04/17/2014	16:59	Michelle L Lalli	1



Analysis Report

LL Sample # WW 7426558 LL Group # 1466285 Account # 11183

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: MW 30 Grab Groundwater Sample

Sunoco M.H. (RCRA)

Project Name: Sunoco M.H. (RCRA)

Collected: 04/09/2014 09:40 by CC Sunoco c/o Stantec 1060 Andrew Drive

Submitted: 04/10/2014 19:20 Suite 140

West Chester PA 19380 Reported: 04/22/2014 07:28

RCR30

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS	Volatiles	EPA 624		ug/l	ug/l	
10371	Benzene		71-43-2	6	0.9	1
10371	Ethylbenzene		100-41-4	0.9 J	0.8	1
	Toluene		108-88-3	0.9 J	0.8	1
	Xylene (total)		1330-20-7	3 J	0.9	1
GC/MS	Semivolatiles	EPA 625		ug/l	ug/l	
10334	Acenaphthene		83-32-9	N.D.	0.3	1
10334			120-12-7	N.D.	0.2	1
10334	Benzo(a)anthracene		56-55-3	N.D.	0.2	1
10334	Benzo(a)pyrene		50-32-8	N.D.	0.3	1
10334	Di-n-butylphthalate		84-74-2	N.D.	0.5	1
	Chrysene		218-01-9	N.D.	0.2	1
10334	bis(2-Ethylhexyl)ph	thalate	117-81-7	N.D.	1	1
10334	Fluorene		86-73-7	N.D.	0.3	1
10334	Naphthalene		91-20-3	3 J	0.2	1
10334	Phenanthrene		85-01-8	0.2 J	0.2	1
10334	Phenol		108-95-2	N.D.	0.4	1
Metals	5	SW-846 601	L0B	mg/l	mg/l	
07051	Chromium		7440-47-3	0.0135 J	0.0016	1
01754	Iron		7439-89-6	0.204	0.0430	1
07055	Lead		7439-92-1	N.D.	0.0047	1
07058	Manganese		7439-96-5	0.0094	0.00083	1
01767	Sodium		7440-23-5	239	0.835	5
Wet Cl	nemistry	EPA 300.0		mg/l	mg/l	
00224	Chloride		16887-00-6	378	20.0	100
00228	Sulfate		14808-79-8	11.1	1.5	5
		EPA 335.4		mg/l	mg/l	
00237	Total Cyanide (wate:		57-12-5	N.D.	0.0050	1
		EPA 420.4		mg/l	mg/l	
00434	Phenols (water)		n.a.	0.027 J	0.015	1
		EPA 1664A		mg/l	mg/l	
00612	SGT-HEM (TPH)	HIA TOUTA	n.a.	N.D.	1.4	1



Analysis Report

Account

LL Sample # WW 7426558

11183

LL Group # 1466285

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: MW 30 Grab Groundwater Sample

Sunoco M.H. (RCRA)

Project Name: Sunoco M.H. (RCRA)

Collected: 04/09/2014 09:40 by CC Sunoco c/o Stantec 1060 Andrew Drive

Submitted: 04/10/2014 19:20 Suite 140

Reported: 04/22/2014 07:28 West Chester PA 19380

RCR30

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/15. The temperature of the temperature blank bottle(s) for the SGT-HEM (TPH) containers upon receipt at the lab was 6.8C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 7.5-9.6 C.

The temperature of the sample bottle(s) for the 625 containers upon receipt at the lab was $8.3-8.7\ \text{C}$ using an IR thermometer.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor			
10371	BTEX by 624	EPA 624	1	M141012AA	04/12/2014		Andrea E Lando	1			
10334	SVOCs 625	EPA 625	1	14102WAB625	04/15/2014	23:50	Linda M Hartenstine	1			
08108	625 Water Extraction	EPA 625	1	14102WAB625	04/13/2014	19:00	Elaine F Stoltzfus	1			
07051	Chromium	SW-846 6010B	1	141011848003	04/16/2014	23:16	John W Yanzuk II	1			
01754	Iron	SW-846 6010B	1	141011848003	04/16/2014	23:16	John W Yanzuk II	1			
07055	Lead	SW-846 6010B	1	141011848003	04/16/2014	23:16	John W Yanzuk II	1			
07058	Manganese	SW-846 6010B	1	141011848003	04/16/2014	23:16	John W Yanzuk II	1			
01767	Sodium	SW-846 6010B	1	141011848003	04/21/2014	17:29	Katlin N Cataldi	5			
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	141011848003	04/14/2014	10:42	Micaela L Dishong	1			
00224	Chloride	EPA 300.0	1	14105347601B	04/15/2014	19:39	Sandra J Miller	100			
00228	Sulfate	EPA 300.0	1	14105347601B	04/15/2014	19:23	Sandra J Miller	5			
00237	Total Cyanide (water)	EPA 335.4	1	14107102101A	04/17/2014	14:37	Venia B McFadden	1			
00434	Phenols (water)	EPA 420.4	1	14106113101A	04/17/2014	10:05	K Robert Caulfeild-James	1			
00492	Cyanide Water Distillation	EPA 335.4	1	14107102101A	04/17/2014	08:45	Nancy J Shoop	1			
00491	Phenol Distillation (water)	EPA 420.4	1	14106113101A	04/16/2014	10:15	Nancy J Shoop	1			
00612	SGT-HEM (TPH)	EPA 1664A	1	14107807801A	04/17/2014	16:59	Michelle L Lalli	1			



Analysis Report

LL Sample # WW 7426559 LL Group # 1466285 Account # 11183

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: MW 40 Grab Groundwater Sample

Sunoco M.H. (RCRA)

Project Name: Sunoco M.H. (RCRA)

Collected: 04/09/2014 13:51 by CC Sunoco c/o Stantec 1060 Andrew Drive

Submitted: 04/10/2014 19:20 Suite 140

Reported: 04/22/2014 07:28 West Chester PA 19380

CAT No.	Analysis Name		CAS Number	As Recei Result	lved	As Received Method Detection Limit	Dilution Factor
GC/MS	Volatiles E	PA 624		ug/l		ug/l	
10371	Benzene		71-43-2	N.D.		0.9	1
	Ethylbenzene		100-41-4	N.D.		0.8	1
10371	Toluene		108-88-3	N.D.		0.8	1
10371	Xylene (total)		1330-20-7	N.D.		0.9	1
GC/MS	Semivolatiles E	PA 625		ug/l		ug/l	
10334	Acenaphthene		83-32-9	0.6 J	т	0.3	1
	Anthracene		120-12-7	N.D.	•	0.2	1
	Benzo(a)anthracene		56-55-3	N.D.		0.2	1
	Benzo(a) pyrene		50-32-8	N.D.		0.3	1
	Di-n-butylphthalate		84-74-2	N.D.		0.5	1
10334			218-01-9	N.D.		0.2	1
	bis(2-Ethylhexyl)phtha	alate	117-81-7	2 J	Л	1	1
	Fluorene		86-73-7	N.D.		0.3	1
10334	Naphthalene		91-20-3	N.D.		0.2	1
10334	Phenanthrene		85-01-8	N.D.		0.2	1
10334	Phenol		108-95-2	N.D.		0.4	1
Metal	s S	W-846 601	L0B	mg/l		mg/l	
07051	Chromium		7440-47-3	N.D.		0.0016	1
01754	Iron		7439-89-6	3.53		0.0430	1
07055	Lead		7439-92-1	N.D.		0.0047	1
07058	Manganese		7439-96-5	0.410		0.00083	1
01767	Sodium		7440-23-5	105		0.835	5
Wet C	hemistry E	PA 300.0		mg/l		mg/l	
00224	Chloride		16887-00-6	95.8		4.0	20
00228	Sulfate		14808-79-8	10		1.5	5
	₽	PA 335.4		mg/l		mg/l	
00237	Total Cyanide (water)	FR 333.4	57-12-5	N.D.		0.0050	1
	_	D3 400 4		mg/l		mg/l	
00424		PA 420.4		_	-	=	1
00434	Phenols (water)		n.a.	0.019 J	J	0.015	1
	E	PA 1664A		mg/l		mg/l	
00612	SGT-HEM (TPH)		n.a.	N.D.		1.4	1



Analysis Report

Account

LL Sample # WW 7426559

11183

LL Group # 1466285

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: MW 40 Grab Groundwater Sample

Sunoco M.H. (RCRA)

Project Name: Sunoco M.H. (RCRA)

Collected: 04/09/2014 13:51 by CC Sunoco c/o Stantec 1060 Andrew Drive

Submitted: 04/10/2014 19:20 Suite 140

Reported: 04/22/2014 07:28 West Chester PA 19380

RCR40

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/15. The temperature of the temperature blank bottle(s) for the SGT-HEM (TPH) containers upon receipt at the lab was 6.8C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 7.5-9.6 C.

The temperature of the sample bottle(s) for the 625 containers upon receipt at the lab was $8.3-8.7\ \text{C}$ using an IR thermometer.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor			
10371	BTEX by 624	EPA 624	1	M141012AA	04/12/2014		Andrea E Lando	1			
10334	SVOCs 625	EPA 625	1	14102WAB625	04/16/2014	00:14	Linda M Hartenstine	1			
08108	625 Water Extraction	EPA 625	1	14102WAB625	04/13/2014	19:00	Elaine F Stoltzfus	1			
07051	Chromium	SW-846 6010B	1	141011848003	04/16/2014	23:20	John W Yanzuk II	1			
01754	Iron	SW-846 6010B	1	141011848003	04/16/2014	23:20	John W Yanzuk II	1			
07055	Lead	SW-846 6010B	1	141011848003	04/16/2014	23:20	John W Yanzuk II	1			
07058	Manganese	SW-846 6010B	1	141011848003	04/16/2014	23:20	John W Yanzuk II	1			
01767	Sodium	SW-846 6010B	1	141011848003	04/21/2014	18:02	Katlin N Cataldi	5			
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	141011848003	04/14/2014	10:42	Micaela L Dishong	1			
00224	Chloride	EPA 300.0	1	14105347601B	04/15/2014	20:12	Sandra J Miller	20			
00228	Sulfate	EPA 300.0	1	14105347601B	04/15/2014	19:56	Sandra J Miller	5			
00237	Total Cyanide (water)	EPA 335.4	1	14107102101A	04/17/2014	14:38	Venia B McFadden	1			
00434	Phenols (water)	EPA 420.4	1	14106113101A	04/17/2014	10:06	K Robert Caulfeild-James	1			
00492	Cyanide Water Distillation	EPA 335.4	1	14107102101A	04/17/2014	08:45	Nancy J Shoop	1			
00491	Phenol Distillation (water)	EPA 420.4	1	14106113101A	04/16/2014	10:15	Nancy J Shoop	1			
00612	SGT-HEM (TPH)	EPA 1664A	1	14107807801A	04/17/2014	16:59	Michelle L Lalli	1			



Analysis Report

LL Sample # WW 7426560 LL Group # 1466285 Account # 11183

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: MW 86 Grab Groundwater Sample

Sunoco M.H. (RCRA)

Project Name: Sunoco M.H. (RCRA)

Collected: 04/09/2014 12:29 by CC Sunoco c/o Stantec 1060 Andrew Drive

Submitted: 04/10/2014 19:20 Suite 140

Reported: 04/22/2014 07:28 West Chester PA 19380

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS	Volatiles	EPA 624		ug/l	ug/l	
10371	Benzene		71-43-2	N.D.	0.9	1
10371	Ethylbenzene		100-41-4	N.D.	0.8	1
10371	Toluene		108-88-3	N.D.	0.8	1
10371	Xylene (total)		1330-20-7	N.D.	0.9	1
GC/MS	Semivolatiles	EPA 625		ug/l	ug/l	
10334	Acenaphthene		83-32-9	N.D.	0.3	1
10334	Anthracene		120-12-7	N.D.	0.2	1
10334	Benzo(a)anthracene		56-55-3	N.D.	0.2	1
10334	Benzo(a)pyrene		50-32-8	N.D.	0.3	1
10334	Di-n-butylphthalate		84-74-2	N.D.	0.5	1
10334	Chrysene		218-01-9	N.D.	0.2	1
	bis(2-Ethylhexyl)ph	thalate	117-81-7	N.D.	1	1
	Fluorene		86-73-7	N.D.	0.3	1
	Naphthalene		91-20-3	N.D.	0.2	1
	Phenanthrene		85-01-8	N.D.	0.2	1
10334	Phenol		108-95-2	N.D.	0.4	1
Metals	3	SW-846 60)10B	mg/l	mg/l	
07051	Chromium		7440-47-3	N.D.	0.0016	1
01754	Iron		7439-89-6	0.204	0.0430	1
07055	Lead		7439-92-1	N.D.	0.0047	1
	Manganese		7439-96-5	0.161	0.00083	1
01767	Sodium		7440-23-5	7.70	0.167	1
Wet Cl	nemistry	EPA 300.0)	mg/l	mg/l	
00224	Chloride		16887-00-6	4.5	1.0	5
00228	Sulfate		14808-79-8	33.9	1.5	5
		EPA 335.4	<u>l</u>	mg/l	mg/l	
00237	Total Cyanide (wate:	r)	57-12-5	N.D.	0.0050	1
		EPA 420.4	<u>L</u>	mg/l	mg/l	
00434	Phenols (water)		n.a.	N.D.	0.015	1
		EPA 16642	A	mg/l	mg/l	
00612	SGT-HEM (TPH)		n.a.	N.D.	1.4	1



Analysis Report

Account

LL Sample # WW 7426560

11183

LL Group # 1466285

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: MW 86 Grab Groundwater Sample

Sunoco M.H. (RCRA)

Project Name: Sunoco M.H. (RCRA)

Collected: 04/09/2014 12:29 by CC Sunoco c/o Stantec 1060 Andrew Drive

Submitted: 04/10/2014 19:20 Suite 140

West Chester PA 19380 Reported: 04/22/2014 07:28

RCR86

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/15. The temperature of the temperature blank bottle(s) for the SGT-HEM (TPH) containers upon receipt at the lab was 6.8C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 7.5-9.6 C.

The temperature of the sample bottle(s) for the 625 containers upon receipt at the lab was 8.3-8.7 C using an IR thermometer.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
10371	BTEX by 624	EPA 624	1	M141051AA	04/15/2014	13:45	Linda C Pape	1
10334	SVOCs 625	EPA 625	1	14102WAB625	04/16/2014	00:38	Linda M Hartenstine	1
08108	625 Water Extraction	EPA 625	1	14102WAB625	04/13/2014	19:00	Elaine F Stoltzfus	1
07051	Chromium	SW-846 6010B	1	141011848003	04/16/2014	23:24	John W Yanzuk II	1
01754	Iron	SW-846 6010B	1	141011848003	04/16/2014	23:24	John W Yanzuk II	1
07055	Lead	SW-846 6010B	1	141011848003	04/16/2014	23:24	John W Yanzuk II	1
07058	Manganese	SW-846 6010B	1	141011848003	04/16/2014	23:24	John W Yanzuk II	1
01767	Sodium	SW-846 6010B	1	141011848003	04/16/2014	23:24	John W Yanzuk II	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	141011848003	04/14/2014	10:42	Micaela L Dishong	1
00224	Chloride	EPA 300.0	1	14105347601B	04/15/2014	20:28	Sandra J Miller	5
00228	Sulfate	EPA 300.0	1	14105347601B	04/15/2014	20:28	Sandra J Miller	5
00237	Total Cyanide (water)	EPA 335.4	1	14107102101A	04/17/2014	14:42	Venia B McFadden	1
00434	Phenols (water)	EPA 420.4	1	14106113101A	04/17/2014	10:08	K Robert Caulfeild-James	1
00492	Cyanide Water Distillation	EPA 335.4	1	14107102101A	04/17/2014	08:45	Nancy J Shoop	1
00491	Phenol Distillation (water)	EPA 420.4	1	14106113101A	04/16/2014	10:15	Nancy J Shoop	1
00612	SGT-HEM (TPH)	EPA 1664A	1	14107807801A	04/17/2014	16:59	Michelle L Lalli	1



Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: Trip Blank Water Sample

Sunoco M.H. (RCRA)

LL Sample # WW 7426561 LL Group # 1466285 Account # 11183

Project Name: Sunoco M.H. (RCRA)

Collected: 04/09/2014 Sunoco c/o Stantec 1060 Andrew Drive

Suite 140

Submitted: 04/10/2014 19:20 Reported: 04/22/2014 07:28

West Chester PA 19380

RCRTB

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS	Volatiles	EPA 624		ug/l	ug/l	
10371	Benzene		71-43-2	N.D.	0.9	1
10371	Ethylbenzene		100-41-4	N.D.	0.8	1
10371	Toluene		108-88-3	N.D.	0.8	1
10371	Xylene (total)		1330-20-7	N.D.	0.9	1

General Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/15.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT	Analysis Name	Method	Trial#	Batch#	Analysis	Analyst	Dilution
No.					Date and Time		Factor
10371	BTEX by 624	EPA 624	1	M141041AA	04/14/2014 14:53	Linda C Pape	1



Analysis Report

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Quality Control Summary

Client Name: Sunoco c/o Stantec Group Number: 1466285

Reported: 04/22/14 at 07:28 AM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank <u>Result</u>	Blank <u>MDL</u>	Report <u>Units</u>	LCS <u>%REC</u>	LCSD %REC	LCS/LCSD <u>Limits</u>	RPD	RPD Max
Batch number: M141012AA	Sample numb	er(s): 742	6556-7426	559				
Benzene	N.D.	0.9	uq/l	93		80-120		
Ethylbenzene	N.D.	0.8	ug/l	100		80-120		
Toluene	N.D.	0.8	ug/l	101		80-120		
Xylene (total)	N.D.	0.9	ug/l	102		80-120		
Batch number: M141041AA	Sample numb	er(a) · 742	6561					
Benzene	N.D.	0.9	ug/1	86		80-120		
Ethylbenzene	N.D.	0.8	ug/l	99		80-120		
Toluene	N.D.	0.8	ug/1	100		80-120		
Xylene (total)	N.D.	0.9	ug/1	104		80-120		
-			3.					
Batch number: M141051AA	Sample numb							
Benzene	N.D.	0.9	ug/l	90		80-120		
Ethylbenzene	N.D.	0.8	ug/l	103		80-120		
Toluene	N.D.	0.8	ug/l	104		80-120		
Xylene (total)	N.D.	0.9	ug/l	109		80-120		
Batch number: 14102WAB625	Sample numb	er(s): 742	26556-7426	560				
Acenaphthene	N.D.	0.3	uq/l	101		83-117		
Anthracene	N.D.	0.2	ug/l	103		75-116		
Benzo(a)anthracene	N.D.	0.2	ug/l	103		76-117		
Benzo(a)pyrene	N.D.	0.3	ug/1	99		69-143		
Di-n-butylphthalate	N.D.	0.5	ug/l	101		84-116		
Chrysene	N.D.	0.2	ug/l	106		81-118		
bis(2-Ethylhexyl)phthalate	N.D.	1.	ug/l	105		86-125		
Fluorene	N.D.	0.3	ug/1	104		80-116		
Naphthalene	N.D.	0.2	ug/1	90		82-115		
Phenanthrene	N.D.	0.2		103				
Phenol			ug/1	41		80-119		
Phenoi	N.D.	0.4	ug/l	41		30-70		
Batch number: 141011848003	Sample numb							
Chromium	N.D.	0.0016	mg/1	99		90-110		
Iron	N.D.	0.0430	mg/1	107		90-112		
Lead	N.D.	0.0047	mg/l	107		88-116		
Manganese	N.D.	0.00083	mg/l	101		90-110		
Sodium	N.D.	0.167	mg/l	103		87-114		
Batch number: 14105347601B	Sample numb	er(s): 742	26556-7426	560				
Chloride	N.D.	0.20	mg/1	100		90-110		
Sulfate	N.D.	0.30	mg/l	100		90-110		
Det als mumbers 14106112121	Cample mills	/	ACEEC 7400	F.C.0				
Batch number: 14106113101A	Sample numb					00 110		
Phenols (water)	N.D.	0.015	mg/l	96		90-110		

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.



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Quality Control Summary

Client Name: Sunoco c/o Stantec Group Number: 1466285

Reported: 04/22/14 at 07:28 AM

Reported: 04/22/14 at 07	Blank	Blank	Report	LCS	LCSD	LCS/LCSD		
<u>Analysis Name</u>	Result	MDL	<u>Units</u>	%REC	%REC	<u>Limits</u>	<u>RPD</u>	RPD Max
Batch number: 14107102101A Total Cyanide (water)	Sample num	nber(s): 74 0.0050		560 91		90-110		
Batch number: 14107807801A SGT-HEM (TPH)	Sample num	nber(s): 74 1.4	26556-7426 mg/l	560 66	66	64-114	1	26

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD <u>Limits</u>	<u>RPD</u>	RPD <u>MAX</u>	BKG Conc	DUP <u>Conc</u>	DUP <u>RPD</u>	Dup RPD <u>Max</u>
Batch number: M141012AA	Sample		: 7426556	-742655		K: P426476			
Benzene	96	98	83-132	2	30				
Ethylbenzene	109	106	82-124	3	30				
Toluene	109	106	84-123	2	30				
Xylene (total)	110	108	79-130	2	30				
Batch number: M141041AA	Sample	number(s)	: 7426561	UNSPK:	P42656	58			
Benzene	100	101	83-132	1	30				
Ethylbenzene	114	119	82-124	4	30				
Toluene	115	119	84-123	4	30				
Xylene (total)	119	124	79-130	4	30				
Batch number: M141051AA	Sample		: 7426560	UNSPK:	P42658	30			
Benzene	95	97	83-132	2	30				
Ethylbenzene	114	116	82-124	2	30				
Toluene	114	116	84-123	1	30				
Xylene (total)	119	122	79-130	3	30				
Batch number: 14102WAB625	Sample	number(s)	: 7426556	-742656	0 UNSPK	K: P426476			
Acenaphthene	107	101	83-119	5	30				
Anthracene	105	101	79-123	4	30				
Benzo(a)anthracene	106	103	86-116	3	30				
Benzo(a)pyrene	102	98	70-121	4	30				
Di-n-butylphthalate	103	101	68-115	2	30				
Chrysene	110	106	78-125	4	30				
bis(2-Ethylhexyl)phthalate	108	104	78-132	3	30				
Fluorene	109	105	74-109	4	30				
Naphthalene	100	96	84-115	3	30				
Phenanthrene	107	103	82-120	4	30				
Phenol	39	34	10-80	13	30				
Batch number: 141011848003		number(s)		-742656			BKG: P42601!		
Chromium	99	102	76-120	2	20	0.0021 J	0.0018 J	14 (1)	20
Iron	113 (2)	110 (2)		0	20	5.05	5.17	2	20
Lead	101	102	75-125	2	20	N.D.	N.D.	0 (1)	20
Manganese	100 (2)	99 (2)	75-125	0	20	2.16	2.19	1	20
Sodium	118 (2)	129 (2)	84-117	1	20	111	115	4	20
Batch number: 14105347601B	Sample	number(s)	: 7426556	-742656	0 UNSPK	K: P427501 1	BKG: P42750	1	

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Analysis Report

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Quality Control Summary

Client Name: Sunoco c/o Stantec Group Number: 1466285

Reported: 04/22/14 at 07:28 AM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u> Chloride Sulfate	MS <u>%REC</u> 95 100	MSD <u>%REC</u>	MS/MSD Limits 90-110 90-110	RPD	RPD <u>MAX</u>	BKG <u>Conc</u> 52.6 19.6	DUP <u>Conc</u> 52.3 19.6	DUP <u>RPD</u> 0 0 (1)	Dup RPD <u>Max</u> 20 20
Batch number: 14106113101A Phenols (water)	Sample 98	number(s) 93	: 7426556 90-110		0 UNSPI 6	K: P425362			
Batch number: 14107102101A Total Cyanide (water)	Sample 98	number(s)	: 7426556 90-110	-742656	0 UNSPI	K: P426585 N.D.	BKG: P426585 N.D.	0 (1)	20
Batch number: 14107807801A SGT-HEM (TPH)	Sample 50*	number(s)	: 7426556 64-132	-742656	0 UNSPI	K: P426468			

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: EPA 624 water

Batch nu	mber: M141012AA		
	1,2-Dichloroethane-d4	Fluorobenzene	4-Bromofluorobenzene
7426556	100	96	101
7426557	102	93	100
7426558	98	94	103
7426559	98	97	102
Blank	102	99	100
LCS	103	98	101
MS	103	95	102
MSD	104	97	101
Limits:	76-114	80-120	86-115
	Name: EPA 624 wa	ter	
Batch nu	mber: M141041AA	-	

	1,2-Dichloroethane-d4	Fluorobenzene	4-Bromofluorobenzene
7426561	108	93	102
Blank	107	95	105
LCS	103	92	103
MS	111	95	106
MSD	108	94	105
Limits:	76-114	80-120	86-115

Analysis Name: EPA 624 water

Bato	h number: 1 1,2-Dich	M141051AA nloroethane-d4	Fluorobenzene	4-Bromofluorobenzene
7426	560 105		92	103

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Analysis Report

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Quality Control Summary

Client Name: Sunoco c/o Stantec
Reported: 04/22/14 at 07:28 AM

Surrogate Quality Control

Blank 105 93 105 LCS 105 96 104 MS 108 94 107 MSD 112 95 105

Limits: 76-114 80-120 86-115

Analysis Name: SVOCs Method 625

Batch number: 14102WAB625

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol
7426556	88	95	92	28	48	92
7426557	86	91	91	26	47	96
7426558	90	97	95	29	51	97
7426559	90	98	92	30	50	93
7426560	89	93	101	28	48	92
Blank	93	97	98	28	44	96
LCS	95	101	108	38	54	95
MS	96	103	107	35	56	90
MSD	92	99	107	30	51	84
Limits:	69-123	76-123	69-130	10-77	10-114	36-140

^{*-} Outside of specification

⁽¹⁾ The result for one or both determinations was less than five times the LOQ.

⁽²⁾ The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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Environmental

💸 eurofins

COC #350612

Invocane, Di-n-b-tyl Ohthale Arthracene, Benzo Calonthrace 山木/ Denzene, Fotal Xyleries Lead, Iron, Manganese, T=Thiosulfate Preservation Codes METALS: CHROMIUM, Flucrence, Nachthaleure me ime wall. Benzene, Tolvene B=NaOH 0=Other 35: Reenaghthense Remarks Benzola) Durank Bis (2-ethy/hexv/ Phonauthrome, For Lab Use Only Date Date N=HNO₃ S=H,SO Salium SCR#: FSC: Received by the Analysis Requested Preservation Codes Received by Received b 8/0 N W-Orb 0 (S) Other: Matrix Surface **NPDES** Water Potable Sediment lio2 4 Relinquished by elingdished by Relinquished by Relinquished by Composite Grab E 0460 1321 Collected Date h/-6-h Turnaround Lime (TAT) Requested (please circle) PWSID #: Quote #: Acct. #: P.O.# (Rush TAT is subject to laboratory approval and surcharge.) Client Information Data Package Options (circle if required) Sample Identification lame of state where samples were collected: E-mail address: Stephanie. Date results are needed: 30 NW 40 oject Name/# E E 25

The white copy should accompany samples to Eurofins Lancaster Laboratories Environmental. The yellow copy should be retained by the client. Eurofins Lancaster Laboratories Environmental, LLC • 2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300

(If yes, indicate QC sample and submit triplicate sample volume.)

Yes

Site-Specific QC (MS/MSD/Dup)?

CT RCP

MA MCP

Type IV (CLP SOW)

ž

Yes

EDD Required?

Type VI (Raw Data Only)

TX TRRP-13

Type III (Reduced non-CLP)

Type I (Validation/non-CLP)

ပွ

Temperature upon receipt 7.9.6

Relinguished by Commercial Carrier

Time (920)

acct 11183 ap 1466285 sample 7426580-61

Second and Fourth Quarters

5 groundwater samples for the following parameters (metals are total - not filtered)

Ī	PARAMETER	EPA METHO	IOD
r	Acenaphthene	625	
T	Anthracene	625 ·	
T	Benzo(a)anthracene	625	
r	Benzo(a)pyrene	625	2 1000m (Amber Glass (None)
r	Bis(2-ethylhexyl)phthalate	625	
T	Chrysene	625	
T	Di-n-butyl phthalate	625	
r	Fluorene	625	
T	Naphthalene	625	
ſ	Phenanthrene	625	
T	Phenol	625	
f	Benzene	624	Sucod (4-8-14)
Ī	Toluene	624	3-40ml (1) whixed (4-8-14)
ľ	Ethylbenzene	624	
t	Total Xylenes	624	
İ	Chromium	SW-846 601)10B \
Ì	Lead	SW-846 601	010B 1-250ml plastic (HMO3)
I	Iron	SW-846 601	010B
Ì	Manganese	SW-846 601	010B /
l	Sodium	SW-846 601	> 1-250m1 plastic (NaOHlasc)
.	Total Cyanides (TCN)	335.4	> 1-250 ml plastic (MUDITIUSE)
Ī	SGT-HEM (TPH)	1664A	······································
ı	Chloride	300.0	>2-40ml VIALS (None)
l	Sulfate	300.0	/
	Phenolics [00434 Phenols (Water	r)] 420.4	1-250ml glass (H2SO4)
	20 groundwater samples for the f		eters: > 1 - 250 ml Ambergloss (4254/Ala 2503) 2-40

SM 20 5310C (TOC) Total Organic Halides SW-846 9020B (TOX)

Prior to commencing work, complete a JSA, sign-in with the CA, and get a permit if the CA requires it.

1. Five (5) observation wells to be sampled:

MW-17 - near Green Street, just beyond the contractor trailer;

MW-28 - along the bulkhead opposite of parking lot from MW-30, may be behind pallets. Sample MW-28 and MW-30 near high tide. MW-28 and MW-30 are in the parking lot in front of the Main Office Building (may need to contact headquarters for access to one of the gates;

MW-30 - edge of employee parking area, near gate - try to sample at high tide;

MW-40 - next to Lube Building. Start with this well as it does not recharge very quickly (purge one volume, go to another well, return and purge the second volume, etc. continuing until done);

MW-86 - downhill from Tank 522, behind safety - recharges well.

1881

15

Arub



Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
С	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
μg	microgram(s)	mg	milligram(s)
mL	milliliter(s)	L	liter(s)
m3	cubic meter(s)	μL	microliter(s)
		pg/L	picogram/liter

- < less than The number following the sign is the <u>limit of quantitation</u>, the smallest amount of analyte which can be reliably determined using this specific test.
- > greater than

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

ppb parts per billion

Dry weightbasis
Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Data Qualifiers:

C - result confirmed by reanalysis.

J - estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

U.S. EPA CLP Data Qualifiers:

	Organic Qualifiers		Inorganic Qualifiers
Α	TIC is a possible aldol-condensation product	В	Value is <crdl, but="" th="" ≥idl<=""></crdl,>
В	Analyte was also detected in the blank	E	Estimated due to interference
С	Pesticide result confirmed by GC/MS	M	Duplicate injection precision not met
D	Compound quantitated on a diluted sample	N	Spike sample not within control limits
Ε	Concentration exceeds the calibration range of	S	Method of standard additions (MSA) used
	the instrument		for calculation
N	Presumptive evidence of a compound (TICs only)	U	Compound was not detected
Р	Concentration difference between primary and	W	Post digestion spike out of control limits
	confirmation columns >25%	*	Duplicate analysis not within control limits
U	Compound was not detected	+	Correlation coefficient for MSA < 0.995
X,Y,Z	Defined in case narrative		

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as "analyze immediately" are not performed within 15 minutes.

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